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ABSTRACT

One of a series of surveys conducted as part of a statewide study to assess educational and employment opportunities of rural populations in Montana, this report summarizes the procedures, conclusions, and recommendations involved in a study of agricultural producers in the State. In an effort to determine employment trends and ascertain occupational variables, questionnaires were used with a sample of 50 percent of the agricultural producers owning farms in the under 6,000 acre category and classified as operator or owner-operator, and 100 percent of those producers operating farms in excess of 6,000 acres. Of the 4,161 surveys mailed to Montana agricultural producers, 1,495 or 35.9 percent were returned. An analysis of data obtained resulted in a pool of information identifying a population of agricultural producers in the State from which a sample may be drawn to further identify job titles, job clusters, and job competencies. Related documents are available as VT 017 462-017 464 in this issue. (SN)

Agri-production Manpower Project Manual

AGRICULTURAL EDUCATION DEPARTMENT · MONTANA STATE UNIVERSITY, BOZEMAN

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AGRICULTURAL PRODUCERS MANPOWER REPORT MANUAL

by

Max L. Amberson
Douglas D. Bishop

The work presented herein was performed by the Montana Agricultural Experiment Station and supported by the Office of Superintendent of Public Instruction, Division of Vocational and Occupational Skills.

The Montana State University
Department of Agricultural Education
Room 313, Linfield Hall, Bozeman, Montana
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PREFACE

Agricultural production affects the existence of every person in Montana. Even the most casual observer cannot help but identify with some of the changes which agriculture has undergone since it is the heart of Montana's economy. Employment changes have occurred as a result of the expanding technological revolution in agriculture. Therefore it is necessary to accurately determine the degree and direction of change and to ascertain the implications of these changes as a basis for developing efficient and effective agricultural educational programs.

This study, a first in Montana, has as its ultimate aim the provision of a more viable manpower source for Montana agricultural producers.

The Agricultural Education Department of Montana State University has undertaken this project in keeping with its goal of providing studies which will help identify, clarify and ultimately improve the quality and availability of agricultural employment to the people of Montana.

Dr. Max L. Amberson
Department of Agricultural Education
Montana State University

ACKNOWLEDGMENTS

The magnitude of conducting Agricultural Manpower Studies in Montana precludes pursuing rational solutions in isolation; therefore, it was essential to enlist the assistance of interested individuals, agencies and organizations throughout Montana and the nation. Several agencies have made specific contributions and should be specifically recognized: the Office of the Superintendent of Public Instruction; the Montana Agricultural Stabilization and Conservation Service; the Internal Revenue Service (Ogden Office); the Office of the Governor of Montana; the Montana Cooperative Extension Service; the Montana Experiment Station; the Montana State University Departments of Agriculture, Mathematics and Library; the Montana Crop and Livestock Reporting Service, Helena, Montana; the Montana Employment Security Commission; the United States Department of Agricultural Economic Research Service; the Office of Congressman Richard G. Shoup; and the Agricultural Committee of the Montana Chamber of Commerce. The cooperation and assistance from the personnel of these agencies greatly facilitated the efforts of this study.

Mrs. Barbara Agocs, technical assistant, and Mrs. Erma Belden, secretary, were responsible for the execution of the manuscript. Their whole-hearted dedication was appreciated.

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I
INTRODUCTION

In a speech made in 1966, George L. Mehren, Assistant Secretary of Agriculture, stated that the story of this half of the 20th century could be expressed in one word: CHANGE. Change has given agriculture new direction, with abundance not only as the end result but as, perhaps, a cause of some of its problems. The number of people living on farms and ranches has decreased and will continue to decline in the future, but farm production of food and fiber continues to increase. Incomes are up. New uses for our natural resources are beginning to emerge... one of the most spectacular of which is recreation. A new approach to farming as part of an overall revival of rural America is another phase of agriculture's new direction. This phenomenon has sometimes been referred to as the "rural renaissance."

As the character of the agricultural industry changes, the nature and scope of educational programs for rural youth and adults must also change. There is a dearth of current data relative to employment opportunities. These data are needed by program planners to develop models for future educational programs for rural youth and adults which, when followed, will provide background for changing current programs and will assure broader program validity in the future. This study will provide employment data about Montana's basic industry--Agriculture. A complete analysis of the manpower data collected, will be useful in establishing priorities for future in-depth studies. These further studies will provide the data needed for making decisions about manpower training and education.

Should the design of such a model prove successful using agriculture as a subject for study, this model could then be transferred to other areas of business.

A REPORTING SYSTEM

Identifying the current and projected agricultural employment needs of approximately 28,000 farms and ranches in Montana is a time-consuming activity. An examination of Federal Internal Revenue Service reports revealed that less than one-half (10,028) of Montana's agricultural producers hire employees. The majority rely solely on family labor to perform the labor functions on their farms and ranches.

The Montana Employment Security Commission and the Montana Economic Research Service are the state agencies who have conducted studies to isolate agricultural employment opportunities. The data collected by these agencies were on a sample census basis for special purposes. The data from the above sources were valuable as a starting point for this study, but specific information relating to production agriculture were lacking. It was, therefore, necessary to conduct a separate in-depth study in order to obtain reliable information.

THE PROPOSAL

In the spring of 1970, the staff of the Department of Agricultural Education proposed to initiate a statewide effort to determine the nature and extent of rural youth and adult educational and employment opportunities uniquely associated with agriculture. The proposed research was viewed as a planned effort to gather data which would reflect a more precise picture of the educational needs and occupational opportunities available to rural youth and adults in Montana.

Separate segments of the project would revolve around the accomplishment of four major objectives:

1. To assess the nature of and extent of educational and employment opportunities for rural youth and adults engaged in or preparing to engage in agricultural or agriculturally related occupations.

2. To develop and demonstrate approved methods and procedures for developing formal and informal rural youth and adult educational programs of effective format to meet objectives derived from an analysis of the need for educational programs in agriculture in Montana.

3. To evolve guidelines for the utilization of an educational consortium to provide educational activities which would enable rural youth and adults in agricultural pursuits to acquire needed competencies.

4. To establish a design and mechanism for the dissemination, evaluation, adjustment and renewal of rural youth and adult educational programs in agriculture in Montana.

During the early stages of the planning process it became apparent that the magnitude of the objectives would dictate that the project be divided into separate, but not mutually exclusive, phases. Reports of similar research conducted in California (17), and Oklahoma (10), specifically

indicated that agri-business and production agriculture should be treated as separate entities. This observation prompted the researchers to divide agri-business and production into two separate research phases. This proved to be a wise decision due to the variety of sources from which original data were derived, the different research techniques employed and the desirability of separate final reports.

THE AGRICULTURAL PRODUCTION RESEARCH EFFORT

Sub-objectives were extrapolated from the four major objectives to enable the researchers to deal specifically with segments of the major problem. Sub-objectives identified were:

1. To involve the several affected agencies, institutions and individuals in Montana in the agricultural manpower identification process.

2. To determine certain basic data about respective agricultural producers.

3. To collect selected basic data about the agricultural producers' operation.

4. To determine the number of seasonal and full-time employees currently employed in agricultural production in Montana and the number of predicted positions three years hence.

5. To ascertain the employee benefits provided by agricultural producers.

6. To determine the job titles in which full-time and seasonal vacancies currently exist among agricultural producers.

7. To determine the nature of employment provided by agricultural producers as it relates to hours per week, months per year, educational requirements, value of salary, meals, housing, etc.

8. To determine the reasons for the difficulty in obtaining and holding employees in certain job titles over the last few years.

PROJECT FUNDING

The original proposal was presented to the Montana Agricultural Experiment Station in June of 1970 to be considered as a part of the total experiment station research effort. After reviewing the objectives of the proposal it was felt that the manpower project did not fit the criteria which had been established for new research projects. In the spring of 1971, the proposal was submitted again for further consideration and, after some modification, was accepted for support with special rural development funds. Sufficient monies were transferred to the Department of Agricultural Education to support a full-time research assistant and to take the initial steps in getting the manpower project underway.

A detailed accounting of anticipated costs of the project indicated that the experiment station's support would not provide sufficient monies to undertake the manpower project during the first year. The project coordinators met with staff members from the Office of the Superintendent of Public Instruction, the Director of Vocational and Occupational Skills and the Director of Research, Planning, Development and Evaluation Component to discuss the problem. As the result of this and subsequent meetings an additional grant was provided to the Agricultural Education Department through the Research, Planning, Development and Evaluation Component, Office of State Superintendent of Public Instruction, to furnish a complete analysis of all manpower data gathered through the research project. The combination of the two grants allowed the project coordinators to launch the entire manpower project as planned.

PROCEDURE

The procedure followed in completing the agricultural production phase of the Agricultural Manpower Project was dictated primarily by the central purpose of the study and by the previously stated sub-objectives. In order to accomplish the previously stated purpose of the research effort of preparing a final agricultural manpower report, the following activities were initiated:

1. Identify interested and influential peer groups and specific opinion leaders within agencies, institutions and organizations in Montana and acquaint them with the objectives of the study.
2. Review pertinent literature and research describing research of a similar nature.
3. Identify the study population, secure the addresses and select a sample population.
4. Develop and test the survey instrument to be used to collect data needed to quantify study objectives.
5. Develop and refine the research methodology to be used in collecting essential data and in preparing the final manual and report.
6. Conduct the agricultural producer survey.
7. Tabulate and record data collected from the survey.
8. Analyze and interpret data collected.
9. Publish and distribute results of the Agricultural Producers Manpower Study.

IDENTIFYING INTERESTED AND INFLUENTIAL GROUPS

At the time the staff of the Department of Agricultural Education at Montana State University was planning the Agricultural Manpower Study two other groups were also exploring the possibility of such a study. These included the Office of the Superintendent of Public Instruction, Division of Vocational and Occupational Skills, and the agri-business sub-committee of the agricultural committee of the Montana Chamber of Commerce. Subsequently, the staff of the Superintendent's office called a meeting of members of the three interested groups. The meeting was general and exploratory in nature with the resulting consensus that if the Agricultural Education Department at Montana State University wished to be primarily involved in a study of this nature, the Superintendent's office and the Chamber of Commerce would lend their support to this effort. Further, they suggested agencies, institutions, organizations and individuals that would be interested in being involved in some way in the study and provided the names and addresses of these individuals and groups.

REVIEW OF LITERATURE AND RESEARCH

Time was the most limiting factor in conducting this study due to the full teaching and advisory load of the staff involved. Therefore, with the aid of a technician, the staff was able to multiply its efforts in searching out literature and related research. Several documents were isolated and relied upon heavily in the design and initiation of the study. These selected references appear in (Appendix A, p. 29-30).

Additional information regarding the development of similar studies was obtained through the ERIC (Educational Resources Information Center) informational system, a current index of educational research prepared through the U. S. Office of Education and now available through the Montana State University Library.

The review of research provided the essential procedure for scientifically obtaining the data needed for the agricultural producers study.

Definition of Agricultural Production

To reduce possible confusion and misunderstandings and to give direction to the process of identifying present and anticipated production agricultural employment opportunities, the following definition was established:

> Agricultural production includes those activities associated with the principles and processes involved in the planning related to and the economic use of facilities, land, machinery, chemicals, finance and labor. These components are involved primarily in the production of plant and animal products. Agricultural production also includes, to varying degrees, the preparation of these products on farms or ranches for man's use and their disposal by marketing.

IDENTIFYING THE AGRICULTURAL PRODUCERS

Agricultural production is Montana's number one income-producing industry. Because of this fact, the names and addresses of these businessmen are recorded in several locations. First, since nearly all Montana's farms and ranches carry on some conservation efforts, the State Agricultural Stabilization and Conservation Office (Bozeman, Montana) has certain basic data about agricultural producers. Second, since labor is a necessary ingredient in any farm or ranch operation, labor costs become a tax deduction and therefore agricultural producers who hire labor can be identified through the Internal Revenue Service. Third, the 1970 agricultural census recorded some agricultural data on computer tapes which are available for use through the State of Montana Planning and Economic Development Office. Fourth, the United States Department of Agriculture (USDA) inventoried the status of agricultural employment and placed selected names and addresses of Montana agricultural producers on file. Fifth, it was also found that Montana County Extension Agents have the names and addresses of agricultural producers on file at each county office.

It should be noted that policy regarding the release of the above mailing lists is an individual matter with each agency. Whether or not one acquires a respective list is dependent upon the objectives of the study being conducted and their relationship to the objectives of the particular agency.

DETERMINING POPULATION AND SAMPLE

Probably the most time consuming and tedious procedure in the study was the determination and designation of the sample population. The cooperation of the State Agricultural Stabilization and Conservation Service (Bozeman, Montana) was enlisted and approval was given by their national office to provide the Agricultural Education Department at Montana State University with a list of producers by counties involved in ASCS programs. The names and addresses of approximately 26,000 producers were key-punched on computer cards and entered on computer tape. In addition, information regarding the agricultural producers' type of operation and the extent of acreage in their operation was entered on IBM cards. The data, which included the producer's name, address, county of residence and zip code mailing number, were put on computer tapes and sorted according to size of farm operation. A coding sheet for this information was devised. (Appendix B, p. 32)

Initially, survey instruments were to be sent to the total ASCS population of 26,000. However, the cost of such a mailing proved to be prohibitive. Consideration of a sample of about 4,000 producers was then entertained with the principles of stratification employed so that a distribution of all sizes of farms and types of farm ownership would be represented.

As this alternative was explored it became obvious that many instruments would be mailed to operations that had not hired employees. Should this occur on a large scale it would be possible to initiate the mailing and not receive the required information regarding current and projected job openings and other information essential to satisfying the objectives of the study. With this in mind, it was necessary to establish a list of producers who hired persons other than family. Further research and discussions revealed the availability of a list of producers in Montana who hired farm labor and who in the calendar year 1971 had paid wages of over $150 or hired workers for 20 days or more. This information was available on tape through the Internal Revenue Service and was requested by the Governor's Office from the Internal Revenue Service as part of the tax treaty existing between the State's Executive Officer and the Commissioner of the Internal Revenue Service in Washington, D. C. The Governor's Manpower Specialist was asked to aid in obtaining this data. After enlisting the assistance of one of Montana's congressional representatives, the names and addresses of Montana agricultural employers on file in the Ogden Regional Office of the Internal Revenue Service were acquired. This list contained 10,028 agricultural producers and was provided at a nominal cost.

The IRS list of employers hiring employees was key-punched on IBM cards. Since the ASCS list and the IRS list contained different information, it was necessary to fuse the two data sources into one aggregate list.

Because the original ASCS listing from some counties, containing approximately 4,000 names was incomplete, those names of producers for which the type of ownership and acreage was omitted on the original lists had to be returned to the county offices of the ASCS. In order to do this, it was necessary to duplicate the original list and return it to the proper county office. In some instances we were able to complete the information and the names were then punched and put into the card deck.

Availability of Card Decks and Computer Lists

Card decks and computer tapes were kept and are available to the Office of the Superintendent of Public Instruction from the Department of Agricultural Education upon request.

Sample Process

The following process was devised to select the sample for the study:

1. Process ASCS cards to remove duplicates.
2. Process ASCS cards and the IRS cards in separate lists sorted by zip codes.
3. Hand match the names of the IRS list with those on the ASCS list.
4. Key punch above list and put into computer to produce a list of persons resulting from the merger of the IRS and ASCS lists.

5. Re-sort the above aggregate list resulting in a list which was cross-classified by type of ownership and size of farm.

6. Establish sampling frame.

7. Select sample.

8. Distribute material to chosen sample.

The several processes executed to derive the sample population appear in Figure 1.

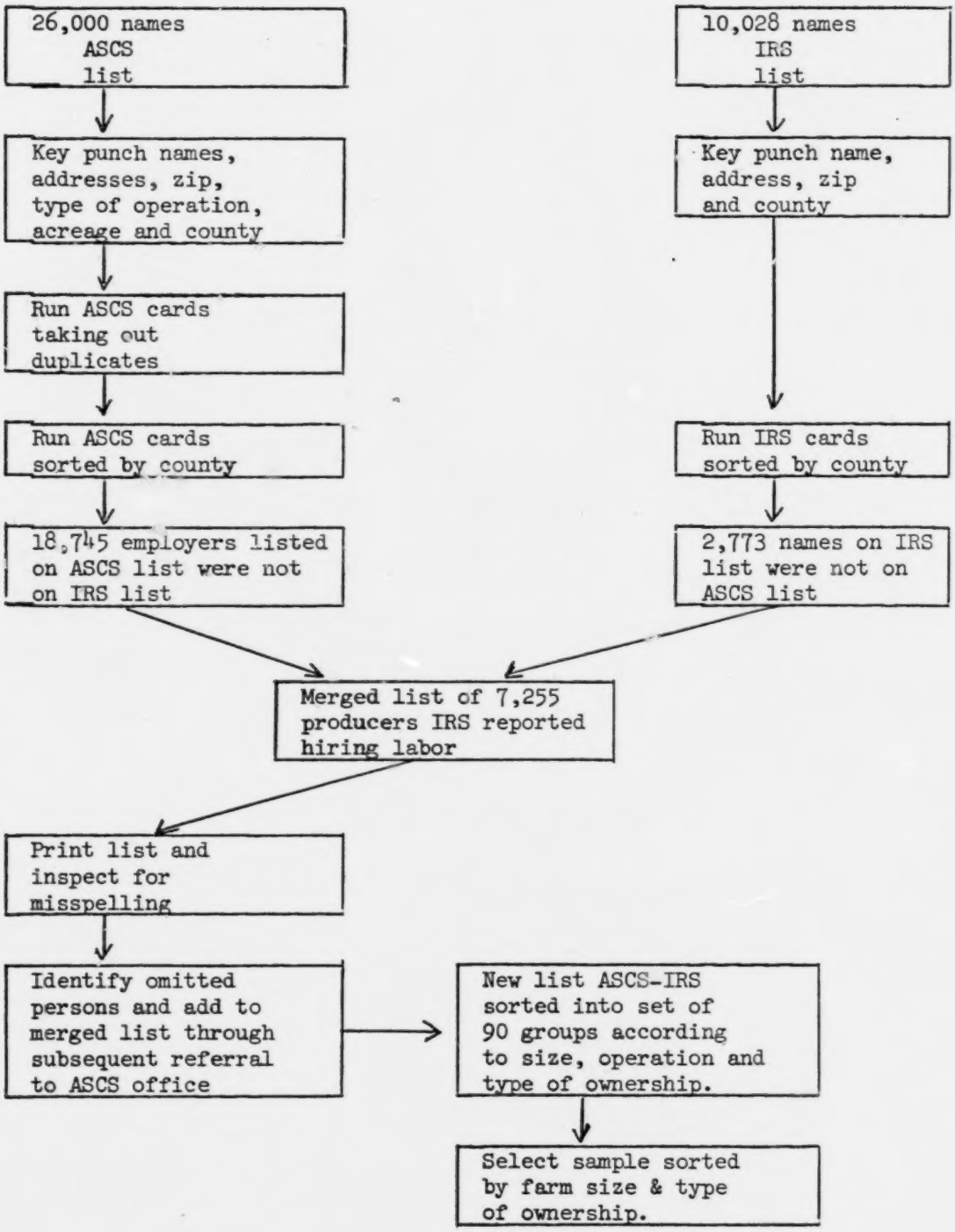
26,000 names ASCS list
10,028 names IRS list
Key punch names, addresses, zip, type of operation, acreage and county
Key punch name, address, zip and county
Run ASCS cards taking out duplicates
Run ASCS cards sorted by county
Run IRS cards sorted by county
18,745 employers listed on ASCS list were not on IRS list
2,773 names on IRS list were not on ASCS list
Merged list of 7,255 producers IRS reported hiring labor
Print list and inspect for misspelling
Identify omitted persons and add to merged list through subsequent referral to ASCS office
New list ASCS-IRS sorted into set of 90 groups according to size, operation and type of ownership.
Select sample sorted by farm size & type of ownership.

Figure 1 SAMPLE SELECTION PROCESS

SAMPLING RATIONALE

Research suggested that the nature and extent of employment among agricultural producers is dependent primarily upon farm size and on the type of farm operation. Since both size and type of ownership were known, an array separating these variables into cells seemed a logical first step in the sampling process.

Sample Population

As described above, the sample was determined to be: Fifty percent of the population of agricultural producers in the 0 to 6,000 acre size category who operated under the following types of ownerships: owner-operation or operator. A 50% random selection was drawn using a table of random numbers. One hundred percent of the agricultural producers who operated farms of 6,000 to 10,000 and over acres and who operated under owner-operator, operator, joint operator, corporation, partner, joint owner-operator, owner-operated-corporation, or owner-operator-partner also was included in the sample population. The rationale for selecting the sample in this way was to assure that smaller cells would be sampled.

ACRES

Type of Operation		0/50	51/100	101/300	301/500	501/1000	1001/2000	2001/4000	4001/6000	6001/10000	over 10000 acres	
Owner Operator	1	26/13	51/25	293/147	266/133	390/195	588/294	539/269	201/100	163/163	148/148	2665/1487
Operator	2	10/5	32/16	251/125	287/143	609/304	1147/573	1139/569	351/175	211/211	106/106	4143/2227
Joint Operator	3	1/1	0/0	4/4	3/3	8/8	18/18	34/34	7/7	7/7	5/5	87/87
Corporation	4	0/0	0/0	3/3	1/1	4/4	7/7	14/14	8/8	16/16	15/15	68/68
Partner	5	0/0	0/0	0/0	4/4	7/7	16/16	30/30	8/8	5/5	3/3	73/73
Joint Owner Operator	6	0/0	0/0	2/2	4/4	6/6	11/11	7/7	4/4	1/1	2/2	37/37
Owner	7	0/0	0/0	6/6	6/6	10/10	15/15	20/20	7/7	7/7	2/2	73/73
Owner Operator Corporation	8	0/0	1/1	1/1	1/1	8/8	17/17	20/20	15/15	10/10	14/14	87/87
Owner Operator Partner	9	0/0	0/0	0/0	3/3	3/3	6/6	6/6	1/1	0/0	3/3	22/22
		37/19	84/42	560/308	575/278	1045/545	1825/957	1809/969	602/325	420/420	298/298	7255/4161

Top figure represents the total population of the cell.

Bottom figure represents the population sampled within this cell.

FIGURE 2

When the 10,028 names appearing on the IRS list were hand-matched to the 26,000 names for which there was ASCS information, a combined ASCS-IRS list resulted with 7,255 producers from which a population of 4,161 producers was selected.

Since a random sample was drawn, it was assumed that there would be representation among agricultural producers from all parts of Montana. To check for geographic distribution, the sample was arrayed over the Montana map. Since the U. S. Postal Service divides Montana into nine regions, and since the mailing lists which would be used to draw a sample contained zip codes which could be used as a means to array the sample, these boundaries were accepted. A geographic array of the sample appears on Figure 3.

Determining Sample

Statisticians advised that a 10% sample would be adequate to sample the population under consideration. However, since funds were available for a larger sample, a sample of 4,161 was drawn.

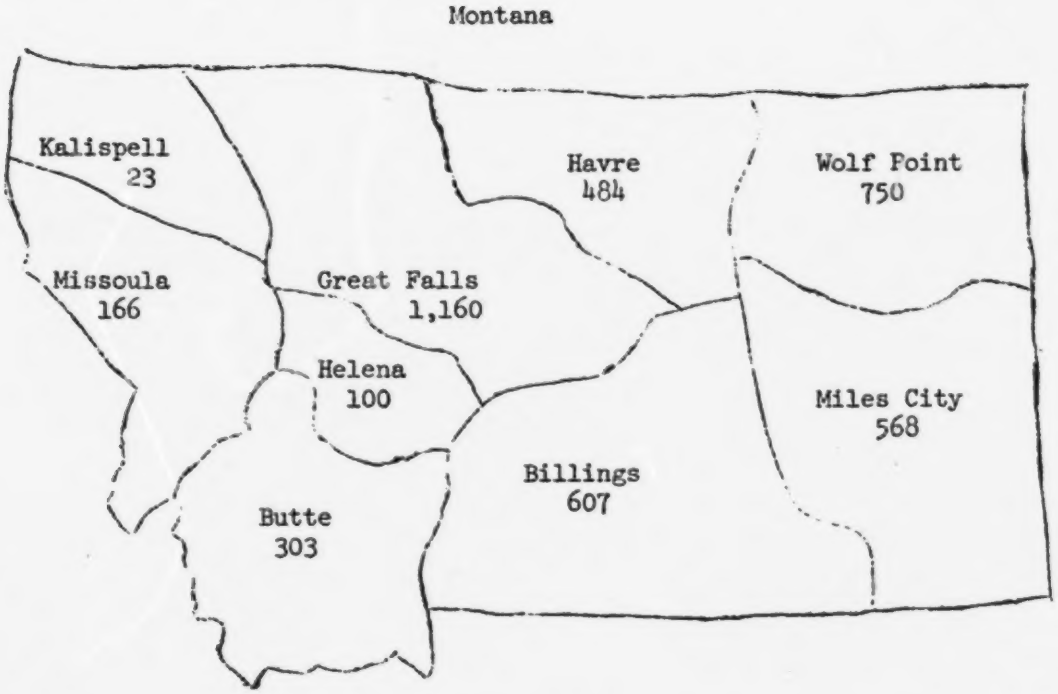

Figure 3 GEOGRAPHIC DISTRIBUTION OF SAMPLE OF AGRICULTURAL PRODUCERS

THE DEVELOPMENT OF THE SURVEY INSTRUMENT

Initially, the research staff prepared a list of questions which answer the sub-objectives. These questions were reviewed by the staff of the Farm Placement and Rural Manpower Office of the Montana Employment Security Division, the Governor's Manpower Specialist, the Department of State Planning and Economic Development and by the staff of the Montana Crop and Livestock Reporting Service of the United States Department of Agriculture. In each instance, the purpose of the conference was to establish whether the information needed for the survey was available from any other source and just what agriculture manpower statistics could be provided by these agencies or offices.

Staff from these agencies cooperated fully and provided examples of their instruments for gathering information and the data available. Unfortunately, the information compiled did not meet the objectives of this study. Although it was detailed it did not relate to specific farms in specific counties. In several instances, the personnel of these agencies made suggestions regarding the type of questions which might be asked and ways of asking these questions. As a result of this meeting, the research staff assembled the questions into a preliminary survey instrument.

To further refine the survey instrument, a group of Montana Vocational Agricultural Instructors was invited to the Montana State University campus. Mr. Ashcraft, State Supervisor of Agricultural Education, was consulted as to who should be involved in this meeting. Their suggestions and comments were incorporated into the instrument appearing in Appendix C.

Dr. James Beckett, Educational Professions Development Act Program Specialist, California State Department of Vocational Education, Sacramento, California, was invited to Montana as a consultant to advise and make recommendations regarding the study design. Beckett's experience as coordinator for the California Agri-business study was invaluable in assisting in the further refinement of Montana's preliminary instrument. Major changes were made in those questions relating to job titles, job changes, income and work periods.

The State Supervisor of Agricultural Education and the staff of the Research, Planning, Development and Evaluation (R.P.D.E.) of the Office of the Superintendent of Public Instruction contributed to the layout, design and further refinement of the instrument.

Three subsequent changes of the instrument between the R.P.D.E. Office and the Department of Agricultural Education resulted in surveys which appear in Appendix D, E, F and G, p. 38-54.

The final survey instrument was then printed using an off-set printing process (Appendix H, p. 56-58) and was field-tested by sending it to selected agricultural producers, known by the researcher, in Gallatin County. These producers were called by telephone and asked if they would respond to the survey. Each of these producers indicated his willingness to assist in the research endeavor and was sent printed survey forms by mail just

as would producers who would be asked to respond at a later date. Each producer responded and seemed to encounter little difficulty with the survey instrument. Although they were given an opportunity, none of the respondents changed the original questionnaire.

In retrospect, the pilot effort to validate the questionnaire was not as extensive as it might have been. When the researcher began to compile data from the questionnaire, several ambiguities and misunderstandings in the interpretations of questions by respondents was evident.

CONDUCTING THE AGRICULTURAL PRODUCER SURVEY

Studies conducted with agricultural producers traditionally net few responses. Purcel's (16) research dealing with agri-businesses revealed that added responses could be acquired through the use of:

1. Different incentives
2. Different number of incentives.

Therefore, the following survey techniques were outlined and followed:

1. Use of a prestigious person to announce the intent and importance of the survey to the recipients in advance of their receiving the survey, through a personally addressed, signed letter.

   Dr. Joe Asleson, Director of the Agricultural Experiment Station and Dean of the College of Agriculture, which includes the Montana Cooperative Extension Service, was selected to be the prestigious person by the researchers. A letter inviting his participation appears in Appendix I, p. 60.

   A letter to the agricultural producers of the sample population (4,161) was written by Asleson and mailed announcing the survey to follow. The letter written to producers by Asleson appears in Appendix I, p. 61.

2. Ten days following the initial letter as mentioned in Item 1, a cover letter, personally addressed and signed by the selected prestigious person, was sent to each person in the sample population. The letter personally invited their participation in the study by responding to the attached survey instrument. Appendix I, p. 62 contains this letter.

3. The use of a personal incentive (instant coffee sample pack) to the recipient of the survey to further encourage his participation was attached. The instant coffee sample was purchased at the cost of approximately 4¢ per pack. (Appendix I, p. 63).

4. As an added incentive to producers, the survey instrument was printed on pale yellow paper. Each survey was coded with type-written numbers. These numbers represented the computer code number and the code number for the farm size and type of farm operation. This code appeared on the top of page 2 of the instrument.

5. At the same time the initial letter from Asleson was sent out, Mr. Doug Warren, Office of Information, Montana State University, prepared news releases for all the major papers in Montana. See Appendix I, p. 64, for a typical release which appeared in the Bozeman Daily Chronicle. A three minute radio tape was prepared by the same office and was played on the Montana State University Experiment Station News throughout Montana during the week in which the letter was being received by producers.

6. A brochure entitled "Agricultural Manpower Project" was prepared which outlined the objectives, goals, benefits, and a general narrative described the study. These were mailed to Montana Teachers of Vocational Agricultural Education, County Extension Personnel, Experiment Station Personnel, Governor's Manpower Committee and state and local offices of the ASCS. A brochure is enclosed in Appendix I, p. 65.

7. Three weeks following the mailing of the survey instrument to Montana agricultural producers, a person was hired to look up phone numbers and contact non-respondents to obtain survey data over the phone, or to urge producers to return the questionnaire. The tally of time and responses to this is detailed on the attached sheet. If the recipients did not wish to provide the data over the phone, they were asked if they would complete a survey if one was mailed to them again. If they replied affirmatively, a letter with a survey was sent. (Appendix I, p. 66 and 56-58). All notations were made on the master sheet of any information that was gained via the telephone calls.

   This procedure did not yield the same results that were realized in the agri-business survey. In many instances, the wives of the ranchers answered the phone and were hesitant to give the information required over the phone.

When the material that came in after this phone effort was designated on the master sheet, it was clearly evident that the telephone contact was effective as many of the people who were called did respond by returning the survey. In fifty-nine and one-half hours of calling, 659 calls were completed with 387 calls reaching a respondent who conversed on the phone with the caller about the Agricultural Producers Survey.

8. Each survey instrument was coded according to a pre-arranged card format. The format for six IBM cards needed to code the survey information is included in Appendix I, p. 67-71.

9. Decisions regarding job titles were made as a guide to key-punchers coding the survey instrument. This code appears in Appendix I, p. 72, 73.

10. Decisions were made regarding the reasons for job vacancies or difficulty in filling job vacancies. This code appears in Appendix I, p. 74.

As the survey instruments were returned, they were filed according to (1) geographic region of the state, (2) size of farm, and (3) type of farm operation. This system of categorization was possible because each survey contained code numbers indicating the above information. The daily receipt of surveys was handled in the following manner:

1. The envelopes were counted and divided into packs of 25.
2. The date was stamped on the back in the upper left hand corner.
3. The code was written on the front page on the upper right hand corner.
4. The questionnaire was scanned for ommissions and confused replies and marked with a red pen with the letters "NV" near the code number and the reason why it was not valid.
5. The totals and reasons for invalidity were tallied on the Agricultural Manpower Survey Returns Columnar Sheet.
6. All questionnaires received were marked off on the master sheet with the date and the letters "NV" next to the date if the questionnaire was not valid with the reason for its not being valid also recorded.
7. The questionnaires were separated and filed by code number with valid questionnaires and non-valid questionnaires separated.

The data were arrayed in a numerical fashion to enable the researcher to account for current and projected job vacancies among Montana's Agricultural Producers, to report certain basic information about particular farm operations and to enumerate reasons for vacancies or difficulties in filling vacancies.

The complete results of the agricultural producers survey are reported in the Agricultural Producers Manpower Report as prepared by the Department of Agricultural Education.

SURVEY RESPONSE

Of the 4,161 surveys mailed to Montana Agricultural Producers, 1,495 or (35.9%) were returned at the writing of this manual.

Due to limitations of staff time and budget, it will be necessary to accept the data without further testing non-respondents from the total population. Since the data from the above mentioned survey will be used primarily as a basis to isolate certain agricultural producers for more in-depth interviews at a later time, it is not essential that a larger than 50% response be received to progress to the second phase of the study.

MAJOR CONCLUSIONS

The procedure outlines herein describe the statewide effort made to develop an economical, efficient and effective method of assessing Montana's current and anticipated employment opportunities in agricultural production. If a representative group of agricultural producers of this size and type has previously been identified it is unknown to the researcher.

As a result of the completion of the agricultural producers study, a population of agricultural producers has been identified from which a sample may be drawn to further define job titles, job clusters and to identify specific job competencies.

A further analysis of the data and an in-depth study of particular job titles should give some indication of the nature of appropriate agricultural education programs in the ensuing years.

RECOMMENDATIONS

Based on the experience gained in developing and using the procedure described, the following recommendations are made:

1. The employment needs of each farmer and rancher vary depending on the nature of his operation. Therefore, every effort should be made to involve a complete sample of potential employers in any effort designed to identify future employment needs and to plan future educational programs.

2. The methodology used in identifying the population for this survey is somewhat complex and should be carefully studied and refined subsequent to using it in further research efforts.

3. Manpower research of this type should be conducted on a longitudinal rather than a point-in-time basis, thereby eliminating what might seem to be "crash efforts".

4. Any agency or educational institution within Montana having an interest in or commitment to manpower research should proceed on the basis of documented research studies.

5. The use of the telephone to follow up non-respondents was less successful in the agricultural producers study than in the agri-business study. It would appear that agricultural producers are reluctant to provide data to researchers over the telephone. The telephone was, however, effective in urging producers to respond to survey instruments sent to them earlier through the mail. It should be noted, however, that in nearly all instances the agricultural producers did not answer the telephone themselves. Since calls were placed during the work day, the agricultural producers' wife most commonly responded to the call. In most instances, she was not sufficiently informed about the farm or ranch operation, or was reluctant to provide information to the caller, so that the questionnaire could be completed.

APPENDIX A

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4. Farm Labor Crop Reporting Board, Statistical Reporting Service, United States Department of Agriculture, Selected issues, 1966 and 1969, Washington D.C. 20210

5. Hamilton, James B., Occupational Opportunities and Training Needs for Agricultural Employment in Selected Areas of Arizona - Maricopa County. Research Report, Agricultural Experiment Station, Tucson, Arizona, 1971.

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7. Horner, James T., and others, State-wide Computerized Model for Determining Occupational Opportunities in Nebraska. Research Report, Nebraska Research Coordinating Unit, July 1968.

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9. Maddox, Marion E., An Annotated Bibliography for Occupational Surveys. Research Report, Arkansas State Department of Education, Little Rock, Arkansas, 1969.

10. Mitchell, Jesse B., Employment Opportunities and Educational Needs In Off-Farm Agri-Business Occupations in Oklahoma. Research Report, Division of Research, Planning and Evaluation, Stillwater, Oklahoma, 1971.

11. Montana Minimum Wage Law and Regulations, Department of Labor and Industry, 1331 Helena Avenue, Helena, Montana 59601

12. Montana State Employment Service, Montana Manpower, First Edition Projected Montana Employment by Industry and Selected Occupation, April 1971, p.1. Helena, Montana.

13. Morton, J.B., and others, Cycle Four Report Occupational Training Information System, Information Services Unit, Division of Research, Planning and Education, Oklahoma State Department of Vocational & Technical Education, Stillwater, Oklahoma.

14. Mouly, George J., The Science of Educational Research. American Book Co., 1963

15. Patterson, Douglas S., A Planning Project To Study Agricultural Education Needs in Florida. University of Florida, Gainsville, Florida.

16. Pucel, Nelson, and Wheeler, Questionnaire Follow-up Returns as a Function of Incentives and Responder Characteristics, March 1971, Vocational Guidance Quarterly.

17. Thompson, O.E., and others, Education in Agriculture in California, Research Report, College of Agricultural & Environmental Sciences, Davis, California, August 1971.

18. Sellers, Walter E., Jr., Family and Hired Labor Used on U.S. Farms in 1966, United States Department of Agriculture Statistical Bulletin No. 459, December 1970.

APPENDIX B

CODE SHEET FOR AGRICULTURAL PRODUCERS

Column 1 through 27. . . . . Producers Name

Column 38 through 52 . . . . . Producers Address

Column 53 through 67 . . . . . Producers Town

Column 68 through 72 . . . . . Producers Zip Code

Column 73 through 74 . . . . . Producers County

Column 75. . . . . Producers Type of Operation

1. OO. . . . . .Owner Operator-operates and owns at least part of the land.
2. OP. . . . . .Operator-operates but someone else owns it.
3. OPJ . . . . . .Joint Operator-two or more operators, doesn't own the land.
4. OPC . . . . . .Corporation-operates farm, the articles of incorporation and has business registered as a corporation.
5. OPP . . . . . .Partner-more than one person operating, does not own land.
6. OOJ . . . . . .Joint Owner Operator-operates as a partnership on one or more of the income producing farm enterprises.
7. OW. . . . . .Owner-owns land but does not farm land.
8. OOC . . . . . .Owns some of land, is the operator and is incorporated.
9. OOP . . . . . .Owns some of land being farmed, is in a partnership.

Column 76. . . . . .Producers Acres in Operation

0. 0 to 50 1,291
1. 51 to 100 974
2. 101 to 300. 2,952
3. 301 to 500. 2,340
4. 501 to 1000 3,282
5. 1001 to 2000. 3,950
6. 2001 to 4000. 3,032
7. 4001 to 6000. 1,002
8. 6001 to 10,000. 648
9. 10,001 plus 479

APPENDIX C

MONTANA AGRICULTURAL PRODUCERS SURVEY

Department of Agricultural Education
Montana State University

	ANSWER HERE
I. FARM WORK - Report work on this farm or ranch during the 1971 calendar year. Include chores and marketing and transacting business.	
a. FARM OPERATOR, how many hours during the week did you work on this farm without receiving cash wages? HOURS WORKED	
b. OTHERS IN YOUR FAMILY, (include children over 19) who worked 15 hours or more on this farm or ranch without receiving cash wages,(do not include housework) NUMBER OF PERSONS	(1)
HOURS WORKED DURING WEEK BY THESE PERSONS	(2)
	(3)
If you do not hire farm workers, part or full-time, omit sections II and III. Please answer section IV-a,b,and c if you anticipate hiring in the future, and then complete the remaining sections.	
c. OTHER PEOPLE - PART TIME who did work FOR PAY on this farm or ranch (including family members receiving cash wages) NUMBER OF PERSONS	
HOURS WORKED DURING THE WEEK BY THESE PERSONS	
CIRCLE MONTHS EMPLOYED	Jan Feb Mar Apr May Jun Jly Aug Sep Oct Nov Dec
What is the total number of Part Time workers you employed in 1971? TOTAL NUMBER OF PART TIME WORKERS	
d. OTHER PEOPLE - FULL-TIME who did farm work for pay (not including family members) NUMBER OF PERSONS	
HOURS WORKED DURING WEEK BY THESE PERSONS	
CIRCLE MONTHS EMPLOYED	Jan Feb Mar Apr May Jun Jly Aug Sep Oct Nov Dec

II. FARM WAGES - Report the average wages being paid to hired farm labor.

	ANSWER HERE
MONTH, WITH HOUSE (no meals)	$
MONTH, WITH BOARD AND ROOM	$
DAY, WITHOUT BOARD AND ROOM	$
HOUR, WITH HOUSE (no meals)	$
HOUR WITH BOARD AND ROOM	$
OTHER	$

Do you provide any of the following benefits?	(circle)
LIABILITY	yes no
WORKMAN'S COMPENSATION	yes no
SOCIAL SECURITY	yes no
OTHER	

III. JOBS PERFORMED

a. PART TIME

What major jobs do your part time employees perform?

	e.g. driving a truck

b. FULL-TIME

What are the job titles for year round help, the level of education required and the average salary you pay?

1. JOB TITLES	2. No. of Persons in This Job Title		4. Educational Level You Require Completed Before Job Entry	5. Average Salary $/Month
YEAR ROUND	In 1971	Expected 1974		
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
Seasonal				$/Hour
1.				
2.				
3.				
4.				
5.				

IV. JOB PREDICTIONS

a. Please list those job titles in which you anticipate an increase or decrease in the number of people by 1975. Include any job titles that will be new to your business or those eliminated by 1975.

JOB TITLE	Increase or Decrease	Expected no. of Change	Reason for Change
Present			
New			
To be Eliminated			

b. Are there any year round jobs for which you are trying to hire a qualified person right now? If yes, please list below.

JOB TITLE	DUTIES	BEGINNING SALARY

c. Are there any job titles (year round or seasonal) which have been difficult to fill (or keep filled) in the last few years? If so, please list them and give the reason they have been problems.

JOB TITLE	REASON FOR PROBLEM

V. EDUCATION

	ANSWER HERE
a. Please check your highest level of educational attainment.	
HIGH SCHOOL	
COLLEGE	
SPECIAL TRAINING	

Are there educational programs that you feel should be available for a farm operator? What type of educational program? _____

_____

	ANSWER HERE
b. Has your present hired labor had any kind of specialized training? What type of training?	(circle) yes no
VI. RETIREMENT INFORMATION	
a. What is your present age? _____	
b. Do you have a retirement plan? _____	
c. At what age do you plan to retire? _____	
VII. GROSS FARM SALES	
a. Please check the bracket that indicates your gross farm sales.	$0 - 39,999
	$40,000 - $99,999
	$100,000 and over
VIII. COMMENTS	

APPENDIX D

MONTANA AGRICULTURAL PRODUCERS INQUIRY

This form is being sent to you as a part of a study regarding agricultural manpower. The method, in most instances, of circling or x-ing the appropriate answer, makes it possible to fill out the blank almost as rapidly as you read it.

It is hoped that you feel the progress of Montana education and agriculture is of enough significance to justify your cooperation and that you can spare the time to read and complete the form. We have chosen this time of the year to accommodate you so that we do not impose ourselves upon you during your busy season.

A copy of the results of this study is available upon request.

I. FARM WORK - I hired the following non-family farm or ranch workers during the 1971 calendar year:

FULL TIME WORKERS - Those who worked daily year round		SEASONAL WORKERS - Those who worked full days but only certain months		PART-TIME WORKERS - Those who worked on an hourly basis over the year (Circle			
Worker	Circle hrs. worked per week	Worker	Circle months employed	Worker	No. of weeks employed	Avg. hrs per w	
1	___ 40 45 50 55 60 ___	1	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec	1	___ 5 10 12 14 16 18 20 22 ___	___ 10 20 3 35 ___	
2	___ 40 45 50 55 60 ___	2	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec	2	___ 5 10 12 14 16 18 20 22 ___	___ 10 20 3 35 ___	
3	___ 40 45 50 55 70 ___	3	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec	3	___ 5 10 12 14 16 18 20 22 ___	___ 10 20 3 35 ___	
4		4		4			
5		5		5			
6		6		6			
7		7		7			
FULL TIME Put additional on back worker hours		SEASONAL Put additional on back worker hours		PART-TIME Put additional on back worker hours			

II. FARM WAGES - I paid the following average wages to my hired help. (Include the value of home, room and board, etc.)

	FULL TIME WAGES - for those who worked daily year round.		SEASONAL WAGES - for those who worked full days but only certain months.		PART-TIME - for those who worked on an hourly basis over the year.	
		avg. amt		avg. amt.		avg. amt.
Worker 1	Month with house, no meals Month w/ board and room Day w/o board and room Other _____ (please specify)	$_____ $_____ $_____ $_____	Worker 1	Month w/ house no meals Month w/ bd. and room Day w/o board and room Hour w/ house Hour w/ bd. & room Other _____ (please specify)	Worker 1	Day w/o bd. & room Hr w/house no meals Hour w/ bd. & room Other _____ (please specify)
2	Month with house, no meals Month w/ board and room Day w/o board and room Other _____ (please specify)	$_____ $_____ $_____ $_____	2	Month w/ house no meals Month w/ bd. and room Day w/o board and room Hour w/ house Hour w/ bd. & room Other _____ (please specify)	2	Day w/o bd. & room Hr w/house no meals Hour w/ bd. & room Other _____ (please specify)
3	"		3	"	3	"
4	"		4	"	4	"
5	"		5	"	5	"
6	"		6	"	6	"
	(put additional on back)			(put additional on back)		(put additional on back)

II. FARM WAGES (cont.) - I provide the following benefits for my hired workers:(Place an X in the proper box)
[1]- Liability [2]- Workman's Compensation [3]- Social Security [4]- Other (please specify)

III. JOBS PERFORMED AND JOB CHANGES - The following information describes the particulars regarding job titles, the anticipated changes and reason for changes in employee numbers, their level of education required, and average salaries for my hired help. (Include the value of home rentals, meals, etc.)

	JOB TITLE	NO. OF PERSONS In 1971	NO. OF PERSONS Expected 1974	REASON FOR CHANGE	EDUCATIONAL LEVEL REQUIRED COMPLETED Don't Care	High School	8th Grade	AVERAGE SALARY PER MONTH Wages	House	Meals	Rm & Bd	Other
FULL	Milker	2	4	Larger herd	X			$400	$90			
	Gen.Machinery											
	Truck Driver											
	Sheep Shearer											
	Gen.Farm Wkr.											
PART TIME * SEASONAL												

47

IV. EMPLOYMENT DIFFICULTIES

A. The following FULL-TIME jobs for qualified help are vacant right now:

JOB TITLE	REASON FOR VACANCY	BEGINNING SALARY - Include value of house, room and board, etc.
e.g. Gen. farm worker	no one qualified	$400/mo. House ($95)

B. The job titles (full time, seasonal, or part time) that have been difficult to fill or keep filled in the last few years are: (Please state reason)

JOB TITLE	YEAR NEEDED	REASON FOR PROBLEM
e.g. Truck or Machinery Operator	8/1970	Not available for the salary paid

48

V. EDUCATION - Please indicate by X in the proper box

A. My highest level of educational attainment is:

[1] Less than high school [2] High school [3] College [4] Special Training (vo-ag, adult ed., vo-tec

B. My present hired labor has had the following specialized training for agriculture:

[1] vo-ag in high school [2] post high school courses in agriculture [3] adult education [4] other

VI. RETIREMENT INFORMATION

A. My present age is (X) [1] 20-29 [2] 30-39 [3] 40-49 [4] 50-59 [5] 60-69 [6] 70- over

B. I plan to retire in [1] 5 yrs. [2] 10 yrs. [3] 20 yrs. [4] ___yrs.

VII. GROSS FARM SALES

A. The bracket that best indicates my gross farm sales is (X):

[1] $0 - $19,999 [2] $20,000 - $30,999 [3] $40,000 - $99,999 [4] $100,000 - over

****

VIII. My farm operation is largely -

[1] Livestock [2] Small grain (other than hay) [3] Combination (Livestock and crops)

****

IX. COMMENTS

_____

_____

_____

_____

Thank you for your assistance in our study. Please indicate if you would like a notice of the report when it is completed. [1] Yes [2] No

Dr. Max L. Amberson
Dr. Douglas D. Bishop
Project Directors
Agricultural Education Department
Montana State University
Bozeman, Montana

APPENDIX E

MONTANA AGRICULTURAL PRODUCERS INQUIRY

This is the inquiry form that I mentioned in my letter and is being sent to you as a part of the study regarding agricultura
in most cases, of checking (✓) or circling the appropriate answer, makes it possible to fill out the blank almost as rapidl

1. Did you hire any non-family farm or ranch workers in 1971? (Place a check ✓ on the line in front of the proper answer.
__ Yes __ No

2. My farm operation is largely: (Place a check ✓ on the line in front of the proper answer.)
__ Livestock __ Small grain (other than hay) __ Combination (livestock and hay) __ Other (specify_____)

JOBS PERFORMED, JOB CHANGES, WAGES, HOURS OF EMPLOYMENT AND EDUCATIONAL REQUIREMENTS for full time (those who worked daily,
seasonal employees (several months).

3. The following information describes the particulars regarding job titles, the anticipated changes and reason for changes
the average monthly salary (include the value of a home, meals, etc.) the hours and months employed and the level of edu

JOB TITLE	NO. OF PERSONS In 1971	NO. OF PERSONS Expected 1974	REASON FOR CHANGE	AVERAGE INCOME PER MONTH Wages	House	Meals	Rm&Bd	HOURS AND MONTHS	Don't Care
								Circle Hours Per Week: 40 45 50 55 60	
								40 45 50 55 60	
								40 45 50 55 60	
								40 45 50 55 60	
								40 45 50 55 60	
								Circle months per year	
								Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec	
								Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec	
								Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec	
								Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec	
								Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec	
								Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec	

4. Circle the average hours per week that your seasonal employees Worked..... __ 5 10 12 14 16 18 20 22 24 26 _

MONTANA AGRICULTURAL PRODUCERS INQUIRY

and is being sent to you as a part of the study regarding agricultural manpower. The method
iate answer, makes it possible to fill out the blank almost as rapidly as you read it.
****

n 1971? (Place a check ✓ on the line in front of the proper answer.)

the line in front of the proper answer.)

ombination
livestock and hay)

__ Other
(specify_____)

AND EDUCATIONAL REQUIREMENTS for full time (those who worked daily, year round) and for

regarding job titles, the anticipated changes and reason for changes in employee numbers,
nome, meals, etc.) the hours and months employed and the level of education required.

COME PER MONTH		HOURS AND MONTHS	EDUCATIONAL LEVEL REQUIRED COMPLETED				
Meals	Rm&Bd	Circle Hours Per Week	Don't Care	High School	8th Grade	Vo-tech Center	Adult Ed.
		40 45 50 55 60					
		40 45 50 55 60					
		40 45 50 55 60					
		40 45 50 55 60					
		40 45 50 55 60					
		40 45 50 55 60					
**********	**********	******Circle months per year					
		Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec					
		Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec					
		Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec					
		Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec					
		Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec					
		Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec					

employees Worked..... __ 5 10 12 14 16 18 20 22 24 26 __

5 1 A

EMPLOYMENT DIFFICULTIES

5. The following FULL-TIME (Year Round) jobs for qualified help are vacant now.

JOB TITLE	REASON FOR VACANCY	BEGINNING SALARY (Include value of house, room and board

The JOB TITLES (full-time and seasonal) that have been difficult to fill or keep filled in the last few years are:

JOB TITLE	YEAR NEEDED	REASON FOR PROBLEM

6. I provide the following benefits for my hired workers. (Place an __ on the line in front of the proper answer)
__ Liability __ Workman's Compensation __ Social Security __ Other_____(Please

7. The bracket that best indicates my gross farm sales is: (Place a check ✓ on the line in front of the proper answer.)
__ less than $10,000 __ $10,000-$19,999 __ $20,000-$39,999 ___$40,000-$69,999 __ $70,000-$99,999 ___$220,00

8. My highest level of education attainment is: (Place a check ✓ on the line in front of the proper answer or answers)
___ Less than high school ___ High school ___ 2 yr. vocational school ___ 4 yr. college ___ Special train
_____ Other_____Please specify.

9. My present age is: ___20-29 ___30-39 ___40-49 ___50-59 ___60-69 ___70-79
I plan to retire in: ___ 5 yrs. ___ 10 yrs ___ 20 yrs. ___Please fill in

****

Thank you for your assistance in our study. A copy of the results of this study will be available upon request. We trust
study will improve the quality of your manpower.

Contractor: Agricultural Education Department
Dr. Max L. Amberson, Project Director
Dr. Douglas D. Bishop, Project Director

Dr. Joe Asleson, Dean
College of Agriculture
Montana State University

qualified help are vacant now.

BEGINNING SALARY (Include value of house, room and board, etc.)

_____ _____
_____ _____
_____ _____

have been difficult to fill or keep filled in the last few years are:

REASON FOR PROBLEM

_____
_____
_____

52 2

workers. (Place an __ on the line in front of the proper answer)
__ Social Security __ Other_____(Please specify)

sales is: (Place a check ✓ on the line in front of the proper answer.)
__ $20,000-$39,999 ___$40,000-$69,999 __ $70,000-$99,999 ___$220,000-$499,999 __ $500,000 & over

(Place a check ✓ on the line in front of the proper answer or answers)
___ 2 yr. vocational school ___ 4 yr. college ___ Special training (adult ed., Vo-ag.)
_____ Other_____Please specify.

40-49 ___50-59 ___60-69 ___70-79
___ 20 yrs. ___Please fill in

****

y of the results of this study will be available upon request. We trust that the results of this

t
ector
irector

Dr. Joe Asleson, Dean
College of Agriculture
Montana State University

APPENDIX F

MONTANA AGRICULTURAL PRODUCERS' INQUIRY

l is being sent to you as a part of the study regarding agricultural manpower. The method in most answer makes it possible to fill out the blank almost as rapidly as you read it. A white example form.

---

rs in 1971? (Place a check (__) on the line in front of the proper answer)

on the line in front of the proper answer)

__Combination (Livestock and crops) __Other (Specify_____)

S OF EMPLOYMENT AND EDUCATIONAL REQUIREMENTS FOR seasonal (those who worked only certain hours, days y year round) employees.

nges and reason for changes in employee numbers, the average monthly salary (include the value of employed and the highest educational level completed.

NCOME PER MONTH ue of:			MONTHS AND HOURS WORKED		HIGHEST EDUCATIONAL LEVEL COMPLETED				
se	Meals	Rm&Bd	Circle months per year	Circle avg. hrs. per wk.	Don't Care :	8th Grade	High School	Vo-tech or Commu. College	College Degree
			J F M A M J J A S O N D	0-13 14-26 27-39					
			J F M A M J J A S O N D	0-13 14-26 27-39					
			J F M A M J J A S O N D	0-13 14-26 27-39					
			J F M A M J J A S O N D	0-13 14-26 27-39					
			J F M A M J J A S O N D	0-13 14-26 27-39					
			J F M A M J J A S O N D	0-13 14-26 27-39					
				Circle avg. hrs. per wk.					
				40 45 50 55 60 65					
				40 45 50 55 60 65					
				40 45 50 55 60 65					
				40 45 50 55 60 65					
				40 45 50 55 60 65					

MONTANA AGRICULTURAL PRODUCERS' INQUIRY

This is the inquiry form mentioned in my letter and is being sent to you as a part of the study regarding agricultural manpower. Th cases of checking (__) or circling the appropriate answer makes it possible to fill out the blank almost as rapidly as you read it. sheet is included to assist you in completing this form.

1. Did you hire any non-family rarm or ranch workers in 1971? (Place a check (__) on the line in front of the proper answer)
___Yes ___No

2. Farm operation is largely: (Place a check (__) on the line in front of the proper answer)
___Livestock ___Small Grain (other than hay) ___Combination (Livestock and crops) ___Other (Specify_____)

JOBS PERFORMED, JOB CHANGES, WAGES, HOURS AND MONTHS OF EMPLOYMENT AND EDUCATIONAL REQUIREMENTS FOR seasonal (those who worked only or months) and for full-time (those who worked daily year round) employees.

3. Please describe job titles, the anticipated changes and reason for changes in employee numbers, the average monthly salary (incl a house, meals,), the hours per week and months employed and the highest educational level completed.

JOB TITLE	NO. OF PERSONS In 1971	NO. OF PERSONS Expected 1974	REASON FOR CHANGE	AVERAGE INCOME PER MONTH Value of: Wages	House	Meals	Rm&Bd	MONTHS AND HOURS WORKED Circle months per year	Circle avg. hrs. per wk.	HIGHEST EDU CO Don't Care	8th Grade	Hig Sch
								J F M A M J J A S O N D	0-13 14-26 27-39			
								J F M A M J J A S O N D	0-13 14-26 27-39			
								J F M A M J J A S O N D	0-13 14-26 27-39			
								J F M A M J J A S O N D	0-13 14-26 27-39			
								J F M A M J J A S O N D	0-13 14-26 27-39			
								J F M A M J J A S O N D	0-13 14-26 27-39			
									Circle avg. hrs. per wk. 40 45 50 55 60 65			
									40 45 50 55 60 65			
									40 45 50 55 60 65			
									40 45 50 55 60 65			
									40 45 50 55 60 65			

ferent full-time employees hired in 1971: _____Total different seasonal employees
_____Total different full-time employees

are vacant now:

BEGINNING SALARY (Include the value of house, room and board, etc.)

_____
_____
_____
_____

ve been difficult to fill or keep filled in the past few years are:

REASON FOR PROBLEM

_____
_____
_____
_____
_____
_____
_____

(Place a check (_) on the line in front of the proper answer)

ation _____Social Security _____Other_____(Please Specify)

ck (_) on the line in front of the proper answer)

___$20,000-$39,999 ___$40,000-$69,999 ___$70,000-$99,999 ___$100,000-$499,999

95

4. Total number of different seasonal and different full-time employees hired in 1971: _____Total different seasonal empl
_____Total different full-time emp

EMPLOYMENT DIFFECULTIES

5. The following jobs of a year round nature are vacant now:

JOB TITLE REASON FOR VACANCY BEGINNING SALARY (Include the value of house, room and board, etc

The JOB TITLES (seasonal and full-time) that have been difficult to fill or keep filled in the past few years are:

JOL TITLE YEAR NEEDED REASON FOR PROBLEM

6. Operator provides the following benefits: (Place a check (_) on the line in front of the proper answer)

_____Liability _____Workmen's Compensation _____Social Security _____Other_____(Please

7. Operator's gross farm sales: (Place a check (__) on the line in front of the proper answer)

___less than $10,000 ___$10,000-$19,999 ___$20,000-$39,999 ___$40,000-$69,999 ___$70,000-$99,999 ___$100,000-$499,99

___$500,000 & over

t: (Place a check (__) on the line in front of the proper answer or answers)

yr. vocational school ___4 yr. college ___Special training (Adult ed., vo-ag. etc)

___40-49 ___50-59 ___60-69 ___70-79

10 years ___20 years ___years (Please specify)

---

the results can be obtained from the Agricultural Education Department of Montana
at the results of this study and the implementation of new agricultural education

Dr. Joe Asleson, Dean
College of Agriculture
Montana State University
Bozeman, Montana 59715

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8. The operator's highest level of educational attainment: (Place a check (__) on the line in front of the proper answer or answer

___Less than high school ___High School ___2 yr. vocational school ___4 yr. college ___Special training (Adult e

9. Operator's present age: ___20-29 ___30-39 ___40-49 ___50-59 ___60-69 ___70-79

10. Operators plans retirement in: ___5 years ___10 years ___20 years ___years (Please specify)

Thank you for your assistance in the study. A copy of the results can be obtained from the Agricultural Education Department of State University, Bozeman, Montana 59715. We trust that the results of this study and the implementation of new agricultural edu programs will improve the quality of your manpower.

Dr. Joe Asleson, Dean
College of Agriculture
Montana State University
Bozeman, Montana 59715

11. COMMENTS_____

APPENDIX G

NA AGRICULTURAL PRODUCERS' INQUIRY

nd is being sent to you as a part of the study regarding agricultural manpower. The method, in most it possible to fill out the blank almost as rapidly as you read it.

☐ livestock ☐ small grain (other than hay) ☐ combination (livestock and crops) ☐ other _____

☐ less than 12 years	☐ high school diploma	☐ 2-year vocational school	☐ college degree
☐ less than 20	☐ 20-29	☐ 30-39	☐ 40-49
☐ 50-59	☐ 60-69	☐ 70-79	☐ more than 80
☐ 5 years	☐ 10 years	☐ 20 years	☐ other _____ (specify)
☐ less than $10,000	☐ $10,000-$19,999	☐ $20,000-$39,999	☐ $40,000-$69,999
☐ $70,000-$99,999	☐ $100,000-$149,999	☐ $150,000-$199,999	☐ $200,000-$499,999
☐ more than $500,000			
e liability insurance	☐ workman's compensation		
☐ social security	☐ other _____		

_____ (seasonal workers - those who worked days but only certain months)

_____ (full-time workers - those who worked steadily, year round)

MONTANA AGRICULTURAL PRODUCERS' INQUIRY

This is the inquiry form mentioned in my letter and is being sent to you as a part of the study regarding agricultural manpower. cases of checking X the appropriate answer makes it possible to fill out the blank almost as rapidly as you read it.

1. My farm operation is largely (check one) : ☐ livestock ☐ small grain (other than hay) ☐ combination Livestock and cr
   If you checked "other" give the type of operation: _____

2. My highest level of education is: ☐ less than 12 years ☐ high school diploma ☐ 2-year vocational schoo

3. My age is (check one): ☐ less than 20 ☐ 20-29 ☐ 30-39 ☐ 50-59 ☐ 60-69 ☐ 70-79

4. I plan to retire in : _____ ☐ 5 years ☐ 10 years ☐ 20 years

5. My gross farm sales in 1971 were: ☐ less than $10,000 ☐ $10,000-$19,999 ☐ $20,000-$39,999 ☐ $70,000-$99,999 ☐ $100,000-$149,999 ☐ $150,000-$199,999 ☐ more than $500,000

6. Which of the following benefits do you provide liability insurance ☐ workman's compensation
   provide for your employees? ☐ social security ☐ other _____

7. Total number of seasonal employees you hired in 1971 (other than family labor): _____ (seasonal workers - those who worked days but only certain mon

8. Total number of full-time employees you hired in 1971 (other than family labor): _____ (full-time workers - those who worked steadily, year round)

me jobs) refer to the various job titles in which you classify your employees. Use one line for each
an X or filling in spaces. See example sheet.

le in 1971 pect to 1974. d the 1974 give a ed change.	FOR EACH JOB TITLE INDICATE WITH AN X THE MONTH(S) THAT EMPLOYEE(S) IN THAT TITLE WORKED IN 1971.												Average monthly income you provide for employee in each job title.			Indicate with an X the educational requirements for each job title in 1971.					Indicate with an X the average number of hours per week persons in each job title worked in 1971.						
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Wages	Value of house or room, if provided	Value of meals, if provided	No requirement	8th grade	High Sch. Grad	2-yr. Vo-Tech	College Degree	1-19	20-29	30-39	40-49	50-59	60 or more

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le in 1971 pect to 1974. d the 1974 give a ed change.	Average monthly income you provide for employee in each job title.			Indicate with an X the educational requirements for each job title in 1971.				
	Wages	Value of house or room, if provided	Value of meals if provided	No requirement	8th grade	High Schl. Grad	2-yr. Vo-Tech.	College Degree

Section 9 (seasonal jobs) and Section 10 (full-time jobs) refer to the various job titles in which you classify your employees. title and complete the items in that line by using an X or filling in spaces. See example sheet.

9. Seasonal jobs

JOB TITLES (see white example sheet)	Number of employees in this title in 1971	Number of persons you expect to employ in this title in 1974.	If the 1971 number and the 1974 number are different give a reason for the expected change.	FOR EACH JOB TITLE INDICATE WITH AN X THE MONTH(S) THAT EMPLOYEE(S) IN THAT TITLE WORKED IN 1971. Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average monthly income you provide for employee in each job title. Wages	Value of house or room, if provided	Value of meals, if provided	Indicate with an X the educational re... for each job title. No requirement	8th grade	High Sch. Grad.	1-yr. Voc-Tech.	College D...

10. Full-time jobs

JOB TITLES (see white example sheet)	Number of employees in this title in 1971	Number of persons you expect to employ in this title in 1974.	If the 1971 number and the 1974 number are different give a reason for the expected change.	Average monthly income you provide for employee in each job title. Wages	Value of house or room, if provided	Value of meals if provided	Indicate with an X the ... for each job title in 19 No requirement	8th grade

ne following:	12. If you have full-time positions which have been difficult to fill or to ke filled in the past few years complete the following:		
nning salary clude room and rd, etc., if vided)	Job title of the position	Year	Reason for the difficulty

ult to the	14. Comments
culty	

vill be used to develop new agricultural education programs. A copy of the results can

Dr. Joe Asleson, Dean
College of Agriculture
Montana State University
Bozeman, Montana 59715

11. If you have current full-time job openings, complete the following:

Job title for which an opening exists	Reason this opening exists	Beginning salary (include room and board, etc., if provided)

12. If you have full-time positions which have been filled in the past few years complete the follo

Job title of the position	Year	Reason fo

13. If you have seasonal positions which have been difficult to fill or to keep filled in the past few years complete the following:

Job title of the position	Year	Reason for the difficulty

14. Comments

Thank you for your assistance. The results of this study will be used to develop new agricultural education programs. A copy of t be obtained by writing to me at the address below.

Dr. Joe Asleson, Dean
College of Agriculture
Montana State Universit
Bozeman, Montana 59715

APPENDIX H

ONTANA AGRICULTURAL PRODUCERS' INQUIRY

ent to you as a part of the study regarding agricultural manpower. The method, in most cases, of checking he blank almost as rapidly as you read it.

vestock	☐ 2 small grain (other than hay)	☐ 3 combination (livestock and crops)	☐ 4 other
ss than 12 years	☐ 2 high school diploma	☐ 3 2-year vocational school	☐ 4 college degree
ss than 20	☐ 2 20-29	☐ 3 30-39	☐ 4 40-49
-59	☐ 6 60-69	☐ 7 70-79	☐ 8 more than 80
years	☐ 2 10 years	☐ 3 20 years	☐ 4 other _____ (specify)
ss than $10,000	☐ 2 $10,000 - $19,999	☐ 3 $20,000 - $39,999	☐ 4 $40,000 - $69,999
0,000 - $99,999	☐ 6 $100,000 - $149,999	☐ 7 $150,000 - $199,999	☐ 8 $200,000 - $499,999
ore than $500,000			

ability insurance ☐ 2 workman's compensation

cial security ☐ 4 other _____

_____ seasonal workers - those who worked days but only certain months

_____ full-time workers - those who worked steadily, year round

MONTANA AGRICULTURAL PRODUCERS' INQUIRY

This is the inquiry mentioned in my letter and is being sent to you as a part of the study regarding agricultural manpower. The method, in ☒ the appropriate answer makes it possible to fill out the blank almost as rapidly as you read it.

1. My farm operation is largely (check one): ☐ 1 livestock ☐ 2 small grain (other than hay) ☐ 3 combination (livestock and crops)
   If you checked "other" give the type of operation: _____ ▶ ☐

2. My highest level of education is: ☐ 1 less than 12 years ☐ 2 high school diploma ☐ 3 2-year vocational school

3. My age is (check one): ☐ 1 less than 20 ☐ 2 20-29 ☐ 3 30-39 ☐ 5 50-59 ☐ 6 60-69 ☐ 7 70-79

4. I plan to retire in: _____ ▶ ☐ 1 5 years ☐ 2 10 years ☐ 3 20 years

5. My **gross** farm sales in 1971 were: ☐ 1 less than $10,000 ☐ 2 $10,000 - $19,999 ☐ 3 $20,000 - $39,999 ☐ 5 $70,000 - $99,999 ☐ 6 $100,000 - $149,999 ☐ 7 $150,000 - $199,999 ☐ 9 more than $500,000

6. Which of the following benefits do you provide for your employees? ☐ 1 liability insurance ☐ 2 workman's compensation ☐ 3 social security ☐ 4 other _____

7. Total number of seasonal employees you hired in 1971 (other than family labor): ☐ seasonal workers - those who worked days but only certain

8. Total number of full-time employees you hired in 1971 (other than family labor): ☐ full-time workers - those who worked steadily, year round

r to the various **job titles** in which you classify your employees. Use one

1	For each job title indicate with an X the month(s) that employee(s) in that title worked in 1971.												Average monthly income you provide for employee in each job title.			Indicate with an X the educational requirements for each job title.					Indicate with an X the average number of hours per week the persons in each job title worked in 1971.							
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Wages	Value of house or room, if provided	Value of meals if provided	No requirement	8th grade	High Sch. Grad.	2-yr. Vo-Tech.	Col. Degree	1-13	14-26	27-39	40-44	45-49	50-54	55-59	60 or more

1	Average monthly income you provide for employee in each job title.			Indicate with an X the educational requirements for each job title in 1971.					
	Wages	Value of house or room, if provided	Value of meals, if provided	No requirement	8th grade	High Schl. Grad	2-yr. Vo-Tech.	College Degree	

Section 9 (seasonal jobs) and Section 10 (full-time jobs) refer to the various **job titles** in which you classify your employees. Use one the items in that line by sing an X or filling in spaces.

9. Seasonal jobs

JOB TITLES	Number of employees in this title in 1971	Number of persons you expect to employ in this title in 1974.	If the 1971 number and the 1974 number are different give a reason for the expected change.	For each job title indicate with an X the month(s) that employee(s) in that title worked in 1971. Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Average monthly income you provide for employee in each job title. Wages	Value of house or room, if provided	Value of meals if provided	Indicate with an X the educational requirements for each job title. No requirement	8th grade	High Sch. Grad.	2 yr. Vo-Tech.	Col. Degree

10. Full-time jobs

JOB TITLES	Number of employees in this title in 1971	Number of persons you expect to employ in this title in 1974.	If the 1971 number and the 1974 number are different give a reason for the expected change.	Average monthly income you provide for employee in each job title. Wages	Value of house or room, if provided	Value of meals, if provided	Indicate with an X the education for each job title in 1971. No requirement	8th grade	High Schl. Grad

ete the following:	in the past few years complete the following:		
ginning salary clude room and rd, etc., if vided)	**Job title of the position**	**Year**	**Reason for the difficulty**

difficult to fill or to owing:	14. Comments
ifficulty	

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will be used to develop new agricultural education programs. A copy of the results can be obtained by

Dr. Joe Asleson, Dean
College of Agriculture
Montana State University
Bozeman, Montana 59715

11. If you have current **full-time** job openings, complete the following:

Job title for which an opening exists	Reason this opening exists	Beginning salary (include room and board, etc., if provided)

in the past few years complete the following:

Job title of the position	Year	Reason

13. If you have **seasonal** positions which have been difficult to fill or to keep filled in the past few years complete the following:

Job title of the position	Year	Reason for the difficulty

14. Comments

Thank you for your assistance. The results of this study will be used to develop new agricultural education programs. A copy of the result writing to me at the address below.

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Dr. Joe Asleson, Dean
College of Agriculture
Montana State University
Bozeman, Montana 59715

APPENDIX I

March 14, 1972

To: Dean Joe Asleson
College of Agriculture

From: Dr. Max L. Amberson, Head
Agricultural Education Department

RE: Letter to sample population regarding Agricultural Manpower Project

In reviewing some of the research regarding questionnaire returns, we found the suggestion that a letter from a prestigious person greatly facilitated the percent of returns. We have therefore, composed the attached letter for your perusal. We would greatly appreciate your comments and suggestions and would like to receive your permission to send such a letter to 4,000 agricultural producers selected for our study.

I have also attached a brochure describing our study that we have just had returned from the first printing.

Thank you very much.

MLA:bsa
Enc.

Montana State University
College of Agriculture
Agricultural Experiment Station
Bozeman, Montana 59715
Tel. 406-587-3121

Directors Office

As an agricultural producer, you probably have come to realize that no other means of livelihood requires more varied knowledge and skills. Because of the complexity of today's agricultural operations, adequately trained labor has become an indispensible part of successful agricultural concerns. These facts and the realization that agriculture is Montana's number one industry have encouraged the Agricultural Experiment Station through the Department of Agricultural Education of Montana State University to undertake a study entitled, Agricultural Manpower Project, A Study of the Occupational Opportunities and Educational Needs in Montana's Agricultural Industry.

The purpose of this study is to evaluate the present and projected manpower needs in agricultural production and agri-business, in order to design educational programs which will improve the quality of your manpower. The results of the study will, we hope, benefit all sectors of agriculture. As Dean of the College of Agriculture, I have had the opportunity to observe the urgency of making needed changes in the agricultural offerings at all levels to fit the changing world of today's agriculture.

In a few weeks you will be receiving an inquiry form which is being sent to 4,000 Montana farmers and ranchers. Your cooperation in completing this form and returning it to the Agricultural Education Department of Montana State University is a vital part of our project. We shall greatly appreciate your help and welcome the opportunity to provide you with a copy of the results of this study if you are interested.

I hope you feel that the progress of Montana agriculture and education is of enough significance to justify this effort and your participation in it.

Sincerely,

Dr. Joe Asleson, Dean
College of Agriculture
Montana State University

JA/eb

Montana State University
College of Agriculture
Agricultural Experiment Station
Bozeman, Montana 59715
Tel. 406-587-3121

Directors Office

You are a key source of information in the Montana Manpower Study that I described to you in my recent letter. Have a cup of coffee on us while completing the enclosed inquiry.

As you will recall, the purpose of the study is to gather information which will enable us to design educational programs to insure an adequate supply of trained manpower in agriculture. Keep in mind the data from this study will help us train people to fill your employment needs in the future.

May we assure you the information contained in the questionnaire will be kept in strictest confidence and will not be given to any other source. Please complete the inquiry and return it to us in the enclosed self-addressed postage-free envelope.

Thank you for your interest and willingness to participate in this effort. We are looking forward to your reply.

Sincerely,

Dr. Joe Asleson, Dean
College of Agriculture
Montana State University

JA/eb
Encs.

97% CAFFEIN FREE
INSTANT COFFEE

NET WEIGHT 2 GRAMS

BOZEMAN DAILY CHRONICLE

Study to Determine Occupational And Educational Needs in State

The Montana Agricultural Experiment Station, through the Agricultural Education Department of Montana State University, has launched a study to determine occupational opportunities and educational needs among Montana's agricultural producers and businesses.

The project is funded by the experiment station and the Montana Office of Public Instructions, said Dr. Max Amberson, head of Agricultural Education at MSU and one of the projects' directors.

The study, designed to run for five years, has several objectives.

First, the study group hopes to identify the number and types of occupational opportunities within the agricultural industry.

The next step will be to identify knowledge, skills and attitudes needed by agricultural workers.

After gathering this information, project workers will suggest models for educational programs aimed at developing competencies in present and potential agricultural employes.

This will include information for agricultural educators to utilize in curricula development.

"We will coordinate agricultural programs at all levels and provide a data base for monitoring and forecasting future employment needs in agriculture," Amberson emphasized.

During the month of June, he noted, a selected sample of 4,000 farmers and ranchers will be asked to give information regarding the types of jobs they have to offer, educational requirements necessary to fill these jobs and pertinent facts about their operations.

A comprehensive analysis of current and projected manpower needs in agriculture has never been done and is urgently needed, said Amberson.

We specifically want to help in the training of rural youths and adults in Montana, he said.

Other directors of the project are Dr. Douglas Bishop, assoc. Professor of Agricultural Education and Phillip Ward, Director of Research, Office of Public Instruction.

Additional information regarding the study can be obtained by contacting the Agricultural Education Dept., Montana State University, Bozeman, Mont. 59715.

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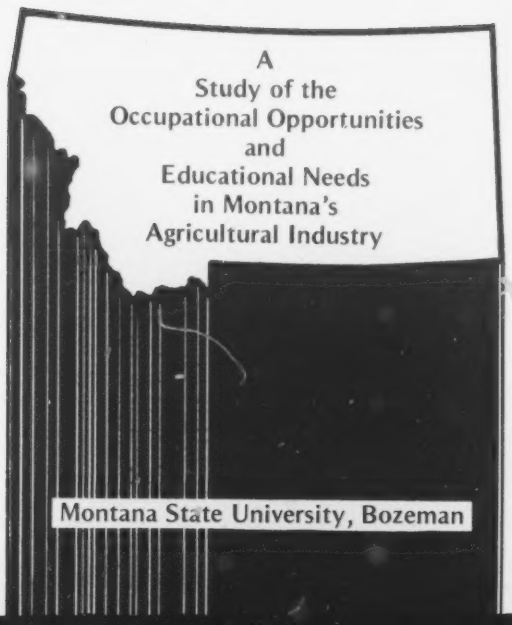
Agricultural Manpower Project

AGRICULTURAL EDUCATION



Agricultural Manpower Project

The purpose of this study is to identify the occupational opportunities and educational needs among Montana's agricultural producers and businesses and to design appropriate agricultural education to provide an adequate manpower force for production agriculture and the related areas such as agricultural mechanics, agricultural supplies and services, ornamental horticulture, forestry and natural resources.

Objectives

To identify the number and types of occupational opportunities in the agricultural industry.

To identify the knowledge, skills and attitudes needed by agricultural employees.

To suggest models for educational programs that would develop competencies in present and potential agricultural employees.

To provide information for agricultural educators to utilize in curriculum development.

To coordinate agricultural education programs at all levels.

To provide data base for monitoring and for forecasting future employment needs in agriculture.

Agriculture is Montana's Number One Industry

Montana's farmers and ranchers received $643 million in 1970 from the sale of agricultural products. Production agriculture is and will continue to be Montana's number one income producing industry. Because agriculture is big and complex, it offers many opportunities for employment in a variety of jobs.

Since there has never been a comprehensive analysis of current and projected manpower needs, this study has grown out of a concern for the broad field of agriculture and more specifically for the training of rural youths and adults in Montana.

The Agricultural Education Department of Montana State University has undertaken this project in keeping with the Department's stated goals of providing studies which will help identify, clarify and ultimately improve the quality and availability of education and agricultural employment to the people of Montana.

Phase I—Funded Cooperatively By:

Superintendent of Public Instruction
Dolores Colburg
and
Montana Agricultural Experiment Station
Montana State University, Bozeman

Project Phases

1971-72 **Phase I**
Agri-Business Survey
Agri-Producers Survey
To determine current and projected manpower needs.

1972-73 **Phase II**
Agri-Business Survey
Agri-Producers Survey
To determine knowledge, skills and attitudes needed by employees.

1973-74 **Phase III**
Institute Educational Programs
To design curriculums and institute agricultural education programs to meet manpower demands for agriculture.

1974-75 **Phase IV**
Adjust Educational Programs
To improve agricultural education programs based on revised manpower and training requirements.

1975-76 **Phase V**
Evaluation
To evaluate and adjust educational programs resulting from changes in manpower requirements.

Surely the effective utilization of a person's potential has benefits that radiate to all sectors . . . his personal life and welfare, industry, the community, the state and the nation. If from the course of this study there evolves an educational program that provides appropriate educational opportunities for rural youth and adults, the ramifications are many.

AGRICULTURAL EDUCATION

Project Goals

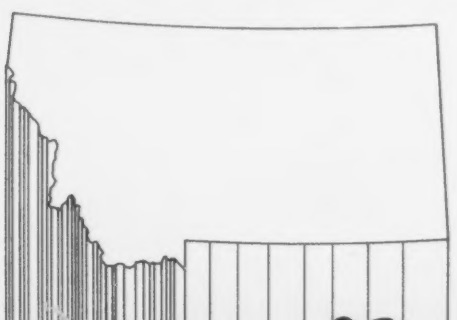
To Serve the Agricultural Industry
By improving the supply of well trained employees for current and emerging occupations.

To Serve Students
By providing valid information concerning career opportunities and educational requirements in the agricultural industry.

To Serve Agricultural Employees
By providing guidelines to establish programs of in-service training to meet their unique needs.

To Serve Agricultural Educators
By providing data measuring the knowledge, skills and attitudes needed by the work force in tomorrow's agriculture.

To Serve Montana's Economy
By increasing the efficiency of matching manpower supply with manpower demand in the agricultural industry.



Project Directors

Dr. Max L. Amberson
Head, Department of Agricultural Education
Montana State University

Dr. Douglas D. Bishop
Assistant Professor, Agricultural Education
Montana State University

Mr. Phillip Ward
Director of Research, Planning, Development
and Evaluation
Office of the Superintendent of Public Instruction

Agricultural Manpower Study
Department of Agricultural Education
313 Linfield Hall
Montana State University
Bozeman, Montana 59715
(406) 587-3121, ext. 314

If interested in a copy of the results of this research effort, please indicate the particular phase and return this form to the above address.

____Phase I
____Phase II
____Phase III
____Phase IV
____Phase V

Name _____

Address _____

City, State _____ ZIP____

2MSU2T1

—Montana State University—

Bozeman, Montana 59715 Tel. 406-587-3121

Department of Agricultural Education
College of Agriculture

The Agricultural Manpower Study questionnaire which we recently telephoned you about is enclosed for your reply. A return envelope is enclosed for your convenience.

We would greatly appreciate your completing the form and returning it to us at your earliest convenience. The information that you are providing is important to the success of our study and of course a well trained manpower source for agricultural production and agri-business.

We are aware that this is an extremely busy time for you and regret that we could not have contacted you at a more opportune time.

We thank you in advance for your reply.

Sincerely,

Dr. Joe Asleson, Dean
College of Agriculture
Montana State University
Bozeman, Montana 59715

JA/bsa

FORMAT FOR CODING DATA ON CARD ONE

	Col 1-9	code number for response and card number (e.g.: 1)
Question 1 -	Col 11	code for farm operation (1-4)
Question 2 -	Col 12	code for level of education (1-5) 5 added for other
Question 3 -	Col 13	code for age (1-8)
Question 4 -	Col 14	code for retirement time (1-4)
Question 5 -	Col 15	code for gross farm sales (1-9)
Question 6 -	Col 16-19	code for employee benefits (1-4)
Question 7 -	Col 20-21	number of seasonal employees in 1971
Question 8 -	Col 22-23	number of full-time employees in 1971
Question 9 -	Col 24-25	number of seasonal jobs listed
Question 10 -	Col 26-27	number of full-time jobs listed
Question 11 -	Col 28	number of full-time job openings
Question 12 -	Col 29	number of full-time jobs difficult to fill
Question 13 -	Col 30	number of seasonal jobs difficult to fill
	Col 31	place a 1 here if there are employees listed, requiring additional cards. If there are no employees listed, code a zero.

FORMAT FOR CODING DATA ON CARD TWO
Seasonal Jobs

Question 9	Col	1-9	code number for response and card number 2
	Col	11-12	job code
	Col	16-17	number of employees in this title in 1971
	Col	18-19	number of employees expected in 1974
	Col	20-21	code for reason of change. Place 0 if no response
	Col	22-33	months that employees in that position worked in 1971. Place a 1 in the column corresponding with the month. If the job were only filled in January and December, columns 22 and 33 would contain a 1, the rest would be 0.
	Col	34-37	salary in wages. (compute on 4.3 weeks per month and the median hours in the span)
	Col	38-40	value of house or room, if provided (zeros if not provided)
	Col	41-43	value of meals if provided(Zeros if not provided)
	Col	44	educational requirements for job (1-6) (no requirement-1, 8th grade-2, high school grad.-3, 2 yr. vo-tech-4, col. degree-5, other-6
	Col	45	average hours per week for the job (1-8 as coded) 1-13 hrs.-1, 14-26 hrs.-2, 27-39 hrs.-3, 40-44 hrs. -4, 45-49 hrs.-5, 50-54 hrs.-6, 55-59 hrs.-7, 60 or more hrs.-8
	Col	46-47	job code for next job
	Col	51-52	number of employees in this title in 1971
	Col	53-54	number of employees in this title in 1974
	Col	55-56	reason for change code
	Col	57-68	months of the year (see description for cols. 22-23)
	Col	69-72	salary in wages (see Col 34-37)
	Col	73-75	value of house or room (zeros if not provided)
	Col	76-78	value of meals
	Col	79	educational requirements for the job (1-6 as coded)
	Col	80	average hours per week for the job (1-8 as coded)

FORMAT FOR CODING DATA ON CARD THREE
Full-time Jobs

Question 10:	Col 1-9	code number for response and card no. (e.g.3)
	Col 11-12	job code
	Col 16-17	number of employees in this title in 1971
	Col 18-19	number of employees in this title in 1974
	Col 20-21	reason code
	Col 22-25	wages (compute hourly wage to months by 4.3 wks.)
	Col 26-28	housing or room value (zeros if not provided)
	Col 29-31	value of meals if provided by employer (zeros if not provided)
	Col 32	educational code (1-6), no requirement-1, 8th grade-2, high school grad-3, 2 yr. vo-tech-4, college degree-5, other-6
	Col 33-34	job code
	Col 38-39	number of employees in this title in 1971
	Col 40-41	number of employees in this title in 1974
	Col 42-43	reason code
	Col 44-47	wages (compute hourly wage to months by 4.3 wks.)
	Col 48-50	value of house or room (zeros if not provided)
	Col 51-53	value of meals (zeros if not provided)
	Col 54	educational requirement code (1-6) see Col 31
	Col 55-56	job code
	Col 60-61	number of employees in this title in 1971
	Col 62-63	number of employees in this title in 1974
	Col 64-65	reason code
	Col 66-69	wages (see directions on Col 22-24)
	Col 70-72	housing (zeros if not provided)
	Col 73-75	meals (zeros if not provided)
	Col 76	educational requirement code (1-6) See Col 31

FORMAT FOR CODING DATA ON CARD FOUR

Question 11:	Col 1-9	code number for response and card number(e.g.4)
	Col 11-12	job code
	Col 16-17	reason code
	Col 18-21	salary/month
	Col 22-23	job code
	Col 27-28	reason code
	Col 29-32	salary
	Col 33-34	job code
	Col 38-39	reason code
	Col 40-43	salary
	Col 44-45	job code
	Col 49-50	reason code
	Col 51-54	salary
	Col 55-56	job code
	Col 60-61	reason code
	Col 62-65	salary
	Col 66-67	job code
	Col 71-72	reason code
	Col 73-76	salary

FORMAT FOR CODING DATA ON CARDS FIVE AND SIX
Card five- full-time difficulties
Card six-seasonal difficulties

Question 12:	Col 1-9	code number for response and card number (e.g.5)
	Col 11-12	job code
	Col 16-17	year, if only 1 year
	Col 18-19	reason code
	Col 21-23	job code
	Col 26-27	year
	Col 28-29	reason code
	Col 31-32	job code
	Col 36-37	year
	Col 38-39	reason code
	Col 41-42	job code
	Col 46-47	year
	Col 48-49	reason code
	Col 51-52	job code
	Col 56-57	year
	Col 58-59	reason code
	Col 61-62	job code
	Col 66-67	year
	Col 68-69	reason code
	Col 77-80	year if more than 1 year.
Question 13:	Card Six	same format as above

JOB TITLES

10 GENERAL FARM WORKER (unspecified)

11 Combination livestock and crops

12 Livestock (general)

13 Sheep

14 Beef

15 Poultry

16 Dairy

17 Hogs

18 Apiarist ass't.

19 Painter or maintanence

21 FIELD CROPS (general)

22 Hay

23 Grain

24 Sugar Beets

25 Vegetables

26 Fruit trees

27 Potatoes

30 FARM MACHINERY OPERATOR

31 Agricultural mechanic

32 Irrigator

JOB TITLES (con't)

40 FARM AND RANCH FOREMAN

41 Livestock

42 Crops

43 Unspecified

44 Combination livestock and crops

50 ARTIFICIAL INSEMINATOR

51 Herdsman

52 Milker

53 Sheep herder

54 Apiarist

55 Cowboy

60 TRUCK DRIVER

70 FARM AND RANCH COOK

71 Farm and ranch general household assistant

80 FORESTRY

90 Horticulture, greenhouse, etc.

REASONS FOR JOB VACANCIES OR DIFFICULTY IN
FILLING JOB VACANCIES

01	Expansion of operations
02	Normal turnover
03	Retirement
04	Loss of family labor
05	Employees not trained for specific jobs
06	Cannot compete with alternatives
07	Unsatisfactory employee performance
08	Salary scale
09	Current labor laws
10	Geographic isolation
11	Low status of job
12	Employees unwilling to work within job conditions
13	Housing inadequate
14	Fringe benefits not adequate - insurance, hospitalization etc.
15	Employees not available at the time needed
16	Addition of family labor
17	Reduction of operation
18	Selling out/sold out
19	Mechanization

END